

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A network connection system comprising:

a client apparatus;

an authentication server; and

a connection server, wherein:

the authentication server includes:

a retention unit for storing second connection authentication information generated by the connection server based on user identification information and associating the second connection authentication information with a connection server address of the connection server;

a first unit for acquiring, from the client apparatus, ~~the second connection authentication information that is generated by the client apparatus based on user identification information input into the client apparatus from the client apparatus~~ and acquiring a client address of the client apparatus when the first unit receives a connection request from the client apparatus; and

a second unit for transmitting the client address to the connection server address associated with the second connection authentication information acquired by the first unit and transmitting the connection server address to the client apparatus;

the client apparatus includes:

a third unit for transmitting the second connection authentication information generated by the client apparatus to the authentication server together with the connection request;

a fourth unit for receiving the connection server address from the authentication server; and

a fifth unit for preparing ~~the~~ first connection authentication information based on the user identification information input into the client apparatus and transmitting the first connection authentication information to the connection server address of the connection server; and

the connection server includes:

a sixth unit for allowing the first connection authentication information to be received from the client address which is received from the authentication server; and

a seventh unit for performing an authentication process by using the first connection authentication information transmitted from the client address.

2. (Original) The network connection system according to claim 1, wherein the second connection authentication information is a message digest of the first connection authentication information.

3. (Currently Amended) An authentication server for being connected to a plurality of client apparatuses and a plurality of connection servers, the authentication server comprising:

a retention unit for storing second connection authentication information generated based on user identification information and associating each second connection authentication information with a connection server address of ~~the~~ a corresponding connection server;

a first unit for acquiring the second connection authentication information from the client apparatus and a client address when the first unit receives a connection request from the client apparatus; and

a second unit for transmitting the acquired client address to the connection server, address of the connection server associated with the acquired second connection authentication information, and transmitting the connection server address to the client apparatus which has transmitted the connection request.

4. (Canceled)

5. (Previously Presented) A connection server operating with an authentication server and a client apparatus, the connection server comprising:

a control unit for receiving a client address of the client apparatus from the authentication server after the authentication server authenticates information received from the client address and allowing authentication information to be received from the client address; and

an authentication unit for receiving the authentication information from the client apparatus having the client address to perform an authentication process by using the authentication information.

6. (Previously Presented) A network connection system comprising:

a client apparatus;

an authentication server; and

a connection server, wherein:

the authentication server includes:

a retention unit for storing a first encrypted user name and a first encrypted password, which are encrypted by a first encryption method, and for associating a connection server address of the connection server with the first encrypted user name and the first encrypted password;

a first unit for acquiring the first encrypted user name and the first encrypted password and a client address when the first unit receives a connection request

from the client apparatus, the first encrypted user name and the first encrypted password being an identification information for identifying a user of the client apparatus; and

a second unit for transmitting the acquired client address to the connection server address associated with the user identification information, receiving from the connection server information indicating that the connection server has shifted to a connection wait state, and transmitting the connection server address to the client apparatus,
and

the client apparatus includes:

a third unit for transmitting to the authentication server the first encrypted user name and the first encrypted password, which are encrypted by the first encryption method, together with the connection request; and

a fourth unit for receiving the connection server address from the authentication server, and transmitting to the connection server address a second encrypted user name and a second encrypted password, which are generated by encrypting using a second encryption method a user name and a password input by the user.

7. (Previously Presented) An authentication server operating with a plurality of client apparatuses and a plurality of connection servers the authentication server comprising:

a retention unit for storing user names and passwords, which are encrypted by a predetermined method, and associating each user name and each password with a connection server address of a corresponding connection server;

a first unit for acquiring an acquired encrypted user name, an acquired encrypted password, and an acquired client address when the first unit receives a connection request from the client apparatus, the encrypted user name and password being an identification information of a user of the client apparatus; and

a second unit for transmitting the acquired client address to the connection server address associated with the acquired encrypted user name and password, receiving from the connection server information indicating that the connection server has shifted to a connection wait state, and transmitting the connection server address to the client apparatus, which has issued the connection request.

8. (Canceled)

9. (Currently Amended) A client apparatus operating with an authentication server and a connection server, the client apparatus comprising:

a connection request unit for transmitting to the authentication server a connection request and a user name and a password which are encrypted by a first encryption method;

a receiving and transmitting unit for receiving a connection server address from the authentication server, encrypting by a second encryption method the user name and the password input by a user, and transmitting the encrypted user name and password to the connection server address;

a retention unit for storing local authentication information, which is previously supplied from the connection server, the local authentication information associating unique information of the client apparatus with at least one of a user name and a password previously provided to the connection server; and

a local authentication unit for generating the unique information ~~based on~~ upon receiving a user name and ~~the~~ a password input by the user, and authenticating the user name and the password input by the user by judging based on the local authentication information whether or not at least one of the user name and the password input by the user is associated with the unique information, wherein:

the connection request unit transmits to the authentication server the connection request and the user name and the password which are encrypted by the first method only when the user name and the password input by the user are authenticated by the local authentication unit.

10. (Previously Presented) A connection server operating with a client apparatus and an authentication server, the connection server comprising:

a control unit that receives from the authentication server an address of the client apparatus and allows communication from the address of the client apparatus for a predetermined period; and

a transmitting unit that transmits to the authentication server information indicating that the connection server has shifted to a connection wait state.

11. (Currently Amended) A network connection system comprising:

a client apparatus;

an authentication server for supplying information guiding a connection destination to the client apparatus; and

a connection server, wherein the client apparatus:

calculates first authentication information unique to the client apparatus to register the first authentication information in the connection server, acquires local authentication information from the connection server, the local authentication information associating the first authentication information with a predetermined authentication information and second authentication information with the predetermined authentication information, and stores the local authentication information;

receives second authentication information input by a user when the user instructs a connection request with respect to the connection server, again calculates the first authentication information unique to the client apparatus, authenticates the second

authentication information and the again calculated first authentication information based on the stored local authentication information, and if authentication is successful, encrypts the second authentication information by a first encryption method and transmits the encrypted second authentication information to the authentication server; and

receives from the authentication server a connection server address of the connection server, transmits to the connection server address the second authentication information encrypted by a second encryption method and starts a communication with the connection server.

12. (Currently Amended) A connection method using a network connection system including a client apparatus, an authentication server, and a connection server, the method comprising:

storing in the authentication server second connection authentication information generated by the connection server based on first connection authentication information;

associating the second connection authentication information with a connection server address of the connection server;

transmitting by the client apparatus to the authentication server a second connection authentication information generated by the client apparatus as user identification information together with a connection request;

acquiring a client address and the user identifying information from the client apparatus when the authentication server receives the connection request from the client apparatus;

transmitting the client address to the connection server address of the connection server when the user identification information is authenticated based on the second connection authentication information;

transmitting the connection server address to the client apparatus;
receiving by the client apparatus the connection server address from the authentication server;

transmitting by the client apparatus a first connection authentication information to the connection server address;

receiving by the connection server the first connection authentication information from the client address; and

performing an authentication process by using the first connection authentication information transmitted from the client address.

13. (Previously Presented) A connection method using a network connection system including a client apparatus, an authentication server, and a connection server, the method comprising:

storing by the authentication server a user name and a password which are encrypted by a first encryption method;

associating the encrypted user name and the encrypted password with a connection server address of the connection server;

transmitting by the client apparatus to the authentication server a connection request and the user name and the password which are encrypted by the first encryption method;

receiving by the authentication server the connection request from the client apparatus;

acquiring a client address of the client apparatus and the user name and the password, which are encrypted by the first encryption method, as information identifying a user of the client apparatus;

transmitting the client address to the connection server address;

receiving by the connection server the client address;
allowing communication from the client apparatus;
transmitting to the authentication server information indicating that the
connection server has shifted to a connection wait state;
encrypting using a second encryption method a user name and a password
input by a user;
transmitting to the connection server address the user name and the password
which are encrypted by the second encryption method; and
performing an authentication process by using the user name and the password
which are encrypted by the second encryption method and are received by the connection
server from the client apparatus.